



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/557,104	11/27/2006	Martin Heinen	20031035-02	5365
27623 7590 05/14/2008 OHLANDT, GREELEY, RUGGIERO & PERLE, LLP ONE LANDMARK SQUARE, 10TH FLOOR STAMFORD, CT 06901				
EXAMINER CHARIOUL, MOHAMED				
ART UNIT 2857		PAPER NUMBER		
MAIL DATE 05/14/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/557,104

**Applicant(s)**

HEINEN ET AL.

**Examiner**

MOHAMED CHARIOUI

**Art Unit**

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: The specification of the invention is objected to because it does not support the added limitation in claims 1 and 10, "comparing the sampled comparator output signal against an expected comparator output signal representing the comparator output signal without error". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. **Claims 1-12** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1 and 10 recites "comparing the sampled comparator output signal against an expected comparator output signal representing the comparator output signal without error" No support in the specification is found for this limitation.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Momtaz et al. (U.S. Patent Number 7,263,151) in view of Moll et al. (U.S Patent Number 7,069,488).

**As per claims 1 and 6-8**, Momtaz et al. teach a level comparator adapted for comparing a level of a comparator input signal and correspondingly providing a comparator output signal (see col. 2, lines 10-42), a sampling unit coupled to the level comparator and being adapted for sampling the comparator output signal (see col. 8, lines 50-56), and a bit error test unit adapted to receive the sampled comparator output signal and to determine therefrom an indication of a bit error in a sequence of the sampled comparator output signal (see col. 2, lines 10-25 and col. 3, lines 1-12).

Momtaz et al. fail to teach comparing the sampled comparator output signal against an expected comparator output signal representing the comparator output signal without error.

Moll et al. teach this feature (see col. 8, lines 26-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Moll et al.'s teaching into Momtaz et al.'s invention because determine the presence of errors in the signal. Therefore, accurate analysis of the signal would be performed.

**As per claim 2**, Momtaz et al. further teach a phase shifting unit being adapted to receive and phase-shift a clock signal and to provide to the sampling unit a phase-shifted clock signal for controlling a sampling point of the sampling unit (see col. 2, lines 35-53 and col. 8, lines 50-56).

**As per claims 10 and 12**, Momtaz et al. further teach comparing a level of a comparator input signal and correspondingly providing a comparator output signal (see col. 2, lines 10-22; col. 4, lines 18-23; and col. 7, lines 31-39), sampling the comparator output signal (see col. 8, lines 50-56), determining from the sampled comparator output signal an indication of a bit error in a sequence of the sampled comparator output signal (see col. 3, lines 1-16).

Momtaz et al. fail to teach comparing the sampled comparator output signal against an expected comparator output signal representing the comparator output signal without error.

Moll et al. teach this feature (see col. 8, lines 26-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Moll et al.'s teaching into Momtaz et al.'s invention because determine the presence of errors in the signal. Therefore, accurate analysis of the signal would be performed.

**As per claims 3, 4 and 11**, Momtaz et al. further teach a control unit being adapted to control at least one of the following: the phase-shifting of the phase shifting unit, the comparison level of the level comparator, operation of the bit error test unit (see col. 4, lines 8-25).

**As per claim 5**, Momtaz et al. further teach an input unit adapted to receive an input signal from external with respect of the integrated circuit, wherein the input unit comprises: the level comparator adapted to receiving as the comparator input signal the input signal, or a signal derived therefrom, and the sampling unit (see col. 4, lines 25-52).

and col. 5, lines 24-50); a processing unit adapted to receive and process the sampled comparator output and an output unit adapted to receive a data signal from the processing unit to derive therefrom an output signal, and to provide the output signal to external with respect of the integrated circuit (see col. 2, lines 53-67 and col. 3, line 64 to col. 4, line 25).

**As per claim 9**, Momtaz et al. further teach the sampling unit comprises a deserializer adapted for deserializing the comparator output (see col. 2, lines 53-67), the integrated circuit further comprises a clock data recovery unit adapted to derive the clock signal from a data signal, preferably from one of: the comparator input signal, the input signal, a signal derived from the input signal, or the comparator output signal, wherein the phase shifting unit is coupled to the clock data recovery unit and receives the recovered clock signal therefrom (see col. 2, lines 35-52).

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571) 272-2213. The examiner can normally be reached Monday through Friday, from 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2857

Mohamed Charioui

5/10/08

/Edward Raymond/

Primary Examiner, Art Unit 2857